

Notice of Allowability

Application No.

10/756,095

Examiner

Jonas N. Strickland

Applicant(s)

KELKAR ET AL.

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the claims filed on 1/13/2004 and the telephone interview of 9/23/04.
2. ☒ The allowed claim(s) is/are claims 22-28, 31, and 32.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3/04, 2/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/04
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stuart D. Frenkel on 9/23/04.

2. The application has been amended as follows:

- In claim 22, line 11, "optionally" has been deleted.
- Claim 30 has been deleted.
- In claim 31, "claim 30" has been deleted and – claim 22 – has been inserted.
- In claim 32, "claim 30" has been deleted and –claim 22 – has been inserted.

3. The following is an examiner's statement of reasons for allowance: The instantly claimed invention is allowable over the cited prior art, because the cited prior art fails to disclose a method of reducing nitrogen oxide emission during fluid catalytic cracking of a hydrocarbon feedstock with a cracking catalyst suitable for catalyzing the cracking of hydrocarbons at elevated temperature whereby lower molecular weight hydrocarbon components are formed in the presence of a NO_x reduction composition comprised of an acidic oxide support, at least one oxide of a lanthanide series element other than ceria; cerium oxide and an oxide of a transition metal selected from Groups I b and II b of the Periodic Table, wherein the ratio between at least one oxide of a lanthanide series element other than ceria and cerium oxide ranges from at least 1.66:1 by weight.

Peters et al. (US Patent 6,129,834) discloses compositions comprising an acidic oxide support, an alkali metal and/or alkaline earth metal a transition metal selected from Groups Ib and/or IIB of the Periodic Table to provide nitrogen oxide control performance in FCC processes. Peters et al. continues to disclose having cerium oxide (see Example 1, col. 4). However, Peters et al. does not disclose at least one oxide of a lanthanide series element other than ceria and wherein the ratio between at least one oxide of a lanthanide series element other than ceria and cerium oxide ranges from at least 1.66:1 by weight.

Green et al. (US Patent 4,973,399) discloses a process for reducing the emission of noxious nitrogen oxides with the flue gas from the regenerator and using at least one oxide of a lanthanide series element other than ceria and wherein the ratio between at least one oxide of a lanthanide series element other than ceria. However, Green et al. also does not disclose wherein the ratio between at least one oxide of a lanthanide series element other than ceria and cerium oxide ranges from at least 1.66:1 by weight.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N. Strickland whose telephone number is 571-272-1359. The examiner can normally be reached on M-TH, 7:30-5:00, off 1st Friday.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonas N. Strickland
September 24, 2004



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